
5. *Evaluation Process*

To evaluate the illustrative alternates, a list of preliminary factors is first chosen by the consultant. Public input is then solicited to amend the list. This occurred through the June round of public meetings. During the August round of public meetings, citizens will be asked for their input to prioritize the factors. The list will also be posted on the project's web site (www.mdot.state.mi.us/m15) for input until September 15.

To manage the evaluation database, a geographic information system (GIS) is being used. GIS is a computer system capable of assembling, storing, manipulating, and displaying geographically referenced information. For example, historic sites, farmland, wetlands, and other distinct areas can be mapped. With this background information, one can determine the extent of impacts of a given roadway alternative.

For the first-level screening of alternatives, the preliminary list of evaluation factors is shown in Figure 5-1. Land use data are available from several sources, including the Michigan Department of Natural Resources through their MIRIS system, which is designed to map Michigan's natural resources. This information will be combined with information from Oakland County Planning available in ARCVIEW and information gathered in the field. Data will be aggregated into categories such as residential development, industry, commercial/office locations, institutions, parks, wetlands, farmland, quarries and landfills, woodlands, and utility corridors.

In addition to the GIS-based information discussed above, the consultant has addressed project need by using travel simulation computer model to assign existing traffic to a network of major roads in the area, including a facility to represent the proposed M-15.

5.1 Evaluation Factors

In August the public will be asked to fill in the form shown in Figure 5-1. The nine factors will be assigned a number so that the factors are ranked from 1 to 9, with 1 being most important and 9 being least important. Those who wish to participate by mail, email, or fax can do so until September 15 by going to the project web site listed on the form. A composite ranking of citizen input as a group will then be determined. The consultant will also weight the factors. The purpose is to provide a basis to evaluate the illustrative alternatives and reduce the list of those options that have a better chance of addressing the needs of the M-15 corridor. This smaller set of alternatives will be screened a second time later in the study with additional public input and additional data.

How Important Are These Factors?

We want to know how important you believe the following factors are when trying to improve the road system in the M-15 Corridor.

To provide us your opinion, please rank the following factors “1” through “9”, with “1” indicating the factor you believe is most important and “9” indicating the factor you believe is least important. Use each number only once. When finished, return your form to a project representative.

Your opinions will be used to evaluate the alternatives. Thank you.

<u>Factor</u>	<u>Rank</u>
Displacement of Houses •	_____
Effects on Historic Properties •	_____
Effects on Waterways •	_____
Effects on Farmland •	_____
Effects on Wetlands •	_____
Effects on Parks/Recreation Areas •	_____
Community Cohesion •	_____
Engineering Difficulty •	_____
Traffic Flow •	_____

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Figure 5-1
First-level Screening
Evaluation Factors

5.1.1 Displacements for Right-of-Way

Estimates of households potentially displaced by a roadway alternative are based on a knowledge of existing right-of-way and an assumption of a future right-of-way dependent on the type of roadway (alternative) being evaluated. Aerial photography is sufficiently detailed to determine the structures that will be taken. Field verifications will determine those that are residential units.

5.1.2 Historic Sites

The *National Register of Historic Places* is a list of resources that are identified as having significance based on a variety of criteria related to history and its interpretation. These may include objects, property, structures, and the like. They are protected by both Section 106 of the National Historic Preservation Act and Section 4(f) of the Department of Transportation Act of 1966. In this analysis, the number of National Register listed properties and/or districts potentially impacted are counted.

Later a field inventory will seek out sites that may be eligible for the Register, but have not yet been listed. Sites of local historic significance will also be plotted. Field surveys of undisturbed areas will seek undiscovered archaeological resources.

5.1.3 Waterways and Waterbodies

Rivers, streams, and lakes are especially sensitive to construction and highway runoff. A count of the number of times an alternative crosses a waterway is an indicator of impacts to the natural environment. In this analysis, the number of such crossings will be noted.

5.1.4 Farmland

Most of the farmland in the region has been converted to other uses, but frequently a high value may be placed on what remains by both the farm owners and the public at large. Additionally, farmland considered as prime and/or unique, or having statewide or local significance, requires special consideration under the federal Farmland Protection Act. This law does not prohibit use of such farmlands, but does require consideration of alternatives that minimize farmland use. Finally, farmland may be enrolled in Michigan's Act 116 program, which allows deferring property taxes while the land is enrolled and requires payback if the land is removed from the program. Such land will be defined. The GIS process allows the calculation of the extent of farmland taken by alternatives.

5.1.5 Wetlands

Wetlands are protected by state and federal law because of their important ecological role. If impacts to wetlands are unavoidable, as is likely for a project of the proposed scope of M-15, there must be a demonstration that there is no practicable alternative to the impact. And, the impacts must be mitigated. Mitigation usually involves replacing wetlands at a ratio of greater than one to one. For purposes of this evaluation, National Wetland Inventory maps, produced by U.S. Fish & Wildlife Service will be reviewed, but most importantly wetlands will be delineated in the field and recorded in the GIS mapping. The GIS process allows the rapid calculation of the extent of wetlands taken by alternatives.

5.1.6 Parks/Recreation Areas

Parks, wildlife refuges and other publicly owned and used lands are protected by Section 4(f) of the Transportation Act of 1966. This act also protects properties on or eligible for the *National Register*, as noted in Section 5.1.2 above. Parklands purchased through the Land and Water Conservation Fund, referred to as Section 6(f) lands, require approval by the National Park Service before conversion to other use. For both 4(f) and 6(f) properties, avoidance is the most prudent course of action.

The number of acres of parklands will be estimated by use of aerial mapping and field work.

5.1.7 Community Cohesion

This evaluation measure focuses on how a new or reconstructed road is received by a community. New roads can be divisive to closely-knit communities or can enhance a community's plan.

5.1.8 Engineering Difficulty

Engineering difficulty reflects the magnitude of engineering challenges an alternative may encounter. These relate to the number and extent of water crossings, railroad crossings, problem soils, wetlands, and topography.

5.1.9 Traffic Flow

By applying MDOT's statewide travel model, preliminary traffic simulations have been made. The results provide an understanding of how various roadways will likely serve traffic in the corridor.

As the project advances, traffic projections will be made using SEMCOG's travel model. It covers a seven-county region that includes Oakland County, but not Genesee. The SEMCOG model will be "extended" into Genesee County by using the zonal structure and data from the Flint area model. In August a land use workshop will be conducted that will provide greater insight into growth patterns and zonal data. The "extended" model with its adjusted data will be used to project traffic volumes for the alternatives to be evaluated.

5.2 Public Involvement

The public involvement effort will drive the project. An e-mail system is available for comments. The project web site is: www.mdot.state.mi.us/m15. Scroll to the bottom of the page. Click on the box called "Email Us Your Comments" and follow the instructions you see. The web site will be regularly updated to keep citizens posted on meetings and project progress. A project telephone "hotline" (1.800.900.2649) is also available for messages.

For each round of public meetings, media releases will be prepared to stimulate attendance, and graphics and handouts will be prepared to convey information and encourage discussion and promote comments. A "diary" of hotline calls, e-mails and public meeting notes will be compiled. A database mailing list will be continuously updated. Updates will be based on incoming hotline calls, e-mail and signups at public meetings.

Four rounds of public meetings are proposed prior to the public hearing, with one wrap-up meeting to follow for a total of six rounds of public involvement. As noted earlier, public input will be essential in the development of the ranking of evaluation factors. During the August public meetings, the public will be provided with a list of preliminary factors for ranking. They will also be asked for their input regarding other factors they deem important for use in later phases of the analysis.